CERTIFICATE OF TRANSMISSION BY FACSIMILE (37 CFR 1.8) Applicant(s): Cheng, et al.			Docket No. 2003B123
Application No. 10/716,306	Filing Date November 18, 2003	Examiner Norca Liz Torres Velazquez	Group Art Unit 1771

Invention: **Elastic Nonwoven Fabrics Made From Blends Of Polyolefins And Processes For Making The Same**

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COMBINED TRANSMITTAL OF APPEAL BRIEF TO THE BOARD OF PATENT APPEALS AND INTERFERENCES & PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. 1.136(a) (Large Entity)	Docket No. 2003B123

In Re Application Of: **Cheng, et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/716,306	November 18, 2003	Norca Liz Torres Velazquez	23455	1771	6939

Invention: **Elastic Nonwoven Fabrics Made From Blends Of Polyolefins And Processes For Making The Same**

COMMISSIONER FOR PATENTS:

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COMBINED TRANSMITTAL OF APPEAL BRIEF TO THE BOARD OF PATENT APPEALS AND INTERFERENCES & PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. 1.136(a) (Large Entity)	Docket No. 2003B123

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10/716,306	November 18, 2003	Norca Liz Torres Velazquez	23455	1771	6939

Invention: **Elastic Nonwoven Fabrics Made From Blends Of Polyolefins And Processes For Making The Same**

TO THE COMMISSIONER FOR PATENTS:

This combined Transmittal of Appeal Brief to the Board of Patent Appeals and Interferences and petition for extension of time under 37 CFR 1.136(a) is respectfully submitted by the undersigned:

Amy Carr-Trexler
Signature

Dated: January 29, 2007

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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appl. No.	:	10/716,306	Confirmation No.: 6939
Applicant	:	Cheng *et al.*	
Filed	:	November 18, 2003	
TC/A.U.	:	1771	
Title:	:	Elastic Nonwoven Fabrics Made From Blends of Polyolefins and Processes for Making the Same	
Examiner	:	Norca Liz Torres Velazquez	
Docket No.	:	2003B123 (US)	
Customer No.	:	23455	Date: January 29, 2007

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellants submit the following:

Table of Contents

I. REAL PARTY IN INTEREST

The real party in interest is ExxonMobil Chemical Patents Inc., the assignee of the present application.

II. RELATED APPEALS AND INTERFERENCES

Appellants, Appellants' counsel, and the assignee of the application are not aware of any other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-71 and 89-115 are pending in the application.

Claims 72-88 and 116-117 were withdrawn by election as directed to non-elected subject matter.

Claims 1-71 and 89-115 are being appealed and are set forth in their entirety in the Claims Appendix submitted herewith.

IV. STATUS OF AMENDMENTS

A Response was entered subsequent to the final rejection. The Advisory Action entered the Response to the Final Rejection and withdrew an obviousness-type double patenting rejection in view of a correctly submitted terminal disclaimer, but did not allow any of the appealed claims.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 is an independent claim. It is drawn to a nonwoven fabric having a permanent set less than 60% and made from a composition comprising a stereoregular crystalline polypropylene first component with a heat of fusion below 50 J/g and a propylene polymer second component. (Paragraphs [18-19] and original claim 1.)

Claim 2 depends from claim 1. It requires a permanent set below about 30%. (Paragraph [20] and original claim 2.)

Claim 3 depends from claim 1. It requires a permanent set below about 15%. (Paragraph [21] and original claim 3.)

Claim 4 depends from claim 1. It requires a fabric elongation beyond 80%. (Paragraph [22] and original claim 4.)

Claim 5 depends from claim 1. It requires a fabric elongation beyond 150%. (Paragraph [23] and original claim 5.)

Claim 6 depends from claim 1. It requires a fabric elongation beyond 300%. (Paragraphs [24 and 70] and original claim 6.)

Claim 7 depends from claim 1. It requires that the nonwoven fabric demonstrates anisotropic elongation. (Paragraph [25] and original claim 7.)

Claim 8 depends from claim 1. It requires that the first component have isotactic stereoregular propylene crystallinity. (Paragraph [17] and original claim 8.)

Claim 9 depends from claim 1. It requires that the first component is a random copolymer of propylene and at least one comonomer selected from ethylene, C_4-C_{12} α-olefins, and combinations thereof. (Paragraph [86] and original claim 9.)

Claim 10 depends from claim 9. It requires that the comonomer of the first component be ethylene. (Paragraph [86] and original claim 10.)

Claim 11 depends from claim 1. It requires that the first component has a narrow composition distribution and a melting point of 25-110 °C. (Paragraph [90] and original claim 11.)

Claim 12 depends from claim 1. It requires that the first component comprise 2-25 wt % polymerized ethylene units. (Paragraph [86] and original claim 12.)

Claim 13 depends from claim 1. It requires that the first component has a heat of fusion of 1-50 J/g. (Paragraph [91] and original claim 13.)

Claim 14 depends from claim 1. It requires that the first component has a heat of fusion of 3-15 J/g. (Original claim 14.)

Claim 15 depends from claim 1. It requires that the first component has a melting point of 35-70 degrees C. (Paragraph [93] and original claim 15.)

Claim 16 depends from claim 1. It requires that the first component has an Mw/Mn of 2-4.5. (Paragraph [94] and original claim 16.)

Claim 17 depends from claim 1. It requires that the first component has an MFR of 5-5000. (Paragraph [103] and original claim 17.)

Claim 18 depends from claim 1. It requires that the second component comprises a propylene polymer produced using a metallocene catalyst system or a Ziegler-Natta catalyst system. (Paragraph [122] and original claim 18.)

Claim 19 depends from claim 1. It requires that the second component has a Mw/Mn of from 1.5 to 8.0. (Paragraphs [122-125] and original claim 19.)

Claim 20 depends from claim 1. It requires that the second component has a melting point of from greater than 110°C. (Paragraph [117] and original claim 20.)

Claim 21 depends from claim 1. It requires that the first component is present in the composition in an amount of from 50 to 99 wt% and the second component is present in an

amount of from 50 to 1 wt%. (Paragraphs [27 and 78] and original claim 21.)

Claim 22 depends from claim 1. It requires that the first component is present in the composition in an amount of from 80 to 99 wt% and the second component is present in an amount of from 20 to 1 wt%. (Paragraph [28] and original claim 22.)

Claim 23 depends from claim 1. It requires that the first component is present in the composition in an amount of from 90 to 99 wt% and the second component is present in an amount of from 10 to 1 wt%. (Paragraph [29] and original claim 23.)

Claim 24 is independent. It is drawn to a laminate made from a nonwoven fabric like that of claim 1 with a permanent set of less than 60%. (Paragraphs [14 and 19] and original claim 24.)

Claim 25 depends from claim 24. It requires a laminate with a permanent set of less than 30%. (Paragraphs [14 and 20] and original claim 25.)

Claim 26 depends from claim 24. It requires a permanent set of less than 15%. (Paragraphs [14 and 21] and original claim 26.)

Claim 27 depends from claim 24. It requires that the laminate have an elongation greater than 80%. (Paragraphs [14 and 22] and original claim 27.)

Claim 28 depends from claim 24. It requires that that the laminate have an elongation greater than 150%. (Paragraphs [14 and 23] and original claim 28.)

Claim 29 depends from claim 24. It requires that that the laminate have an elongation greater than 300%. (Paragraphs [14 and 24] and original claim 29.)

Claim 30 depends from claim 24. It requires that the laminate demonstrates anisotropic elongation. (Paragraphs [14 and 25] and original claim 30.)

Claim 31 depends from claim 24. It requires that the first component has isotactic stereoregular propylene crystallinity. (Paragraph [91] and original claim 31.)

Claim 32 depends from claim 24. It requires that the first component is a random copolymer of propylene and at least one comonomer selected from ethylene, C_4-C_{12} α-olefins, and combinations thereof. (Paragraph [86] and original claim 32.)

Claim 33 depends from claim 32. It requires that the comonomer is ethylene. (Paragraph [86] and original claim 33.)

Claim 34 depends from claim 24. It requires that the first component has a narrow compositional distribution and a melting point of from 25°C to 110°C. (Paragraph [90] and original claim 34.)

Claim 35 depends from claim 24. It requires that the first component comprises from 2 wt% to 25 wt% polymerized ethylene units. (Paragraph [86] and original claim 35.)

Claim 36 depends from claim 24. It requires that the first component has a heat of fusion of from 1 J/g to 50 J/g. (Paragraph [91] and original claim 36.)

Claim 37 depends from claim 24. It requires that the first component has a heat of fusion of from 3 J/g to 15 J/g. (Original claim 37.)

Claim 38 depends from claim 24. It requires that the first component has a melting point of from 35°C to 70°C. (Paragraph [93] and original claim 38.)

Claim 39 depends from claim 24. It requires that the first component has a molecular weight distribution Mw/Mn of from 2.0 to 4.5. (Paragraph [94] and original claim 39.)

Claim 40 depends from claim 24. It requires that the first component has an MFR of from 5 to 5000. (Paragraph [103] and original claim 40.)

Claim 41 depends from claim 24. It requires that the second component comprises a propylene polymer produced using a metallocene catalyst system or a Ziegler-Natta catalyst system. (Paragraph [122] and original claim 41.)

Claim 42 depends from claim 24. It requires that the second component has a Mw/Mn of from 1.5 to 8.0. (Paragraphs [122-125] and original claim 42.)

Claim 43 depends from claim 24. It requires that the second component has a melting point of from greater than 110°C. (Paragraph [117] and original claim 43.)

Claim 44 depends from claim 24. It requires that the first component is present in the composition in an amount of from 50 to 99 wt% and the second component is present in an amount of from 50 to 1 wt%. (Paragraphs [27 and 78] and original claim 44.)

Claim 45 depends from claim 24. It requires that the first component is present in the composition in an amount of from 80 to 99 wt% and the second component is present in an amount of from 20 to 1 wt%. (Paragraph [28] and original claim 45.)

Claim 46 depends from claim 24. It requires that the first component is present in the composition in an amount of from 90 to 99 wt% and the second component is present in an amount of from 10 to 1 wt%. (Paragraph [29] and original claim 46.)

Claim 47 depends from claim 24. It requires that the laminate comprises a layered structure comprising, in various combinations, spunbond layers and meltblown layers. (Paragraph [18] and original claim 47.)

Claim 48 is an independent claim. It is drawn to an article or article component made from a nonwoven fabric like that of claim 1 with a permanent set of less than 60%. (Paragraphs [15 and 19] and original claim 48.)

Claim 49 depends from claim 48. It requires that the permanent set is less than 30%. (Paragraph [20] and original claim 49.)

Claim 50 depends from claim 48. It requires that the permanent set is less than 15%. (Paragraph [21] and original claim 50.)

Claim 51 depends from claim 48. It requires that the nonwoven fabric have an elongation

greater than 80%. (Paragraph [22] and original claim 51.)

Claim 52 depends from claim 48. It requires that the nonwoven fabric have an elongation greater than 150%. (Paragraph [23] and original claim 52.)

Claim 53 depends from claim 48. It requires that the nonwoven fabric have an elongation greater than 300%. (Paragraphs [24 and 70] and original claim 53.)

Claim 54 depends from claim 48. It requires that the nonwoven fabric demonstrates anisotropic elongation. (Paragraph [25] and original claim 54.)

Claim 55 depends from claim 48. It requires that the first component has isotactic stereoregular propylene crystallinity. (Paragraph [17] and original claim 55.)

Claim 56 depends from claim 48. It requires that the first component is a random copolymer of propylene and at least one comonomer selected from ethylene, C_4-C_{12} α-olefins, and combinations thereof. (Paragraph [86] and original claim 56.)

Claim 57 depends from claim 56. It requires that the comonomer is ethylene. (Paragraph [86] and original claim 57.)

Claim 58 depends from claim 48. It requires that the first component has a narrow compositional distribution and a melting point of from 25°C to 110°C. (Paragraph [90] and original claim 58.)

Claim 59 depends from claim 48. It requires that the first component comprises from 2 wt% to 25 wt% polymerized ethylene units. (Paragraph [86] and original claim 59.)

Claim 60 depends from claim 48. It requires that the first component has a heat of fusion of from 1 J/g to 50 J/g. (Paragraph [91] and original claim 60.)

Claim 61 depends from claim 48. It requires that the first component has a heat of fusion of from 3 J/g to 15 J/g. (Original claim 61.)

Claim 62 depends from claim 48. It requires that the first component has a melting point of from 35°C to 70°C. (Paragraph [93] and original claim 62.)

Claim 63 depends from claim 48. It requires that the first component has a molecular weight distribution Mw/Mn of from 2.0 to 4.5. (Paragraph [94] and original claim 63.)

Claim 64 depends from claim 48. It requires that the first component has an MFR of from 5 to 5000. (Paragraph [103] and original claim 64.)

Claim 65 depends from claim 48. It requires that the second component comprises a propylene polymer produced using a metallocene catalyst system or a Ziegler-Natta catalyst system. (Paragraph [122] and original claim 65.)

Claim 66 depends from claim 48. It requires that the second component has a Mw/Mn of from 1.5 to 8.0. (Paragraphs [122-125] and original claim 66.)

Claim 67 depends from claim 48. It requires that the second component has a melting

point greater than 110°C. (Paragraph [117] and original claim 67.)

Claim 68 depends from claim 48. It requires that the first component is present in the composition in an amount of from 50 to 99 wt% and the second component is present in an amount of from 50 to 1 wt%. (Paragraphs [27 and 78] and original claim 68.)

Claim 69 depends from claim 48. It requires that the first component is present in the composition in an amount of from 80 to 99 wt% and the second component is present in an amount of from 20 to 1 wt%. (Paragraph [28] and original claim 69.)

Claim 70 depends from claim 48. It requires that the first component is present in the composition in an amount of from 90 to 99 wt% and the second component is present in an amount of from 10 to 1 wt%. (Paragraph [29] and original claim 70.)

Claim 71 depends from claim 48. It requires that the article or the article component is selected from the group consisting of at least one of a hygiene product, a medical product, and a consumer product. (Paragraph [146] and original claim 71.)

Claim 89 is an independent claim. It is drawn to a laminate produced by the process of thermobonding a plurality of layers comprising nonwoven fabrics comprising at least one layer of a melt blown fabric, a spunbond fabric, or a combination of a meltblown fabric and a spunbond fabric, the at least one layer made from a composition like that of claim 1 and having a permanent set of less than 60%. (Paragraph [18] and original claim 89.)

Claim 90 depends from claim 89. It requires that the permanent set is less than 30%. (Paragraph [20] and original claim 90.)

Claim 91 depends from claim 89. It requires that the permanent set is less than 15%. (Paragraph [21] and original claim 91.)

Claim 92 depends from claim 89. It requires that the at least one layer has an elongation of greater than 80%. (Paragraph [22] and original claim 92.)

Claim 93 depends from claim 89. It requires that the at least one layer have an elongation greater than 150%. (Paragraph [23] and original claim 93.)

Claim 94 depends from claim 89. It requires that the at least one layer has an elongation of greater than 300%. (Paragraphs [24 and 70] and original claim 94.)

Claim 95 depends from claim 89. It requires that the at least one layer demonstrates anisotropic elongation. (Paragraph [25] and original claim 95.)

Claim 96 depends from claim 89. It requires that the first component is present in the composition in an amount of from 50 to 99 wt% and the second component is present in an amount of from 50 to 1 wt%. (Paragraphs [27 and 78] and original claim 96.)

Claim 97 depends from claim 89. It requires that the first component is present in the composition in an amount of from 80 to 99 wt% and the second component is present in an

amount of from 20 to 1 wt%. (Paragraph [28] and original claim 97.)

Claim 98 depends from claim 89. It requires that the first component is present in the composition in an amount of from 90 to 99 wt% and the second component is present in an amount of from 10 to 1 wt%. (Paragraph [29] and original claim 98.)

Claim 99 is an independent claim. It is drawn to a nonwoven fabric having a permanent set of less than 60% and made from a composition of 5-100% of a stereoregular crystalline polypropylene first component with a heat of fusion below 50J/g and 95-0% of a propylene polymer second component. (Paragraph [16] and original claim 99.)

Claim 100 depends from claim 99. It requires that the permanent set is less than 15%. (Paragraph [20] and original claim 100.)

Claim 101 depends from claim 99. It requires that the permanent set is less than 15%. (Paragraph [21] and original claim 101.)

Claim 102 depends from claim 99. It requires that the nonwoven fabric has an elongation of greater than 80%. (Paragraph [22] and original claim 102.)

Claim 103 depends from claim 99. It requires that the nonwoven fabric has an elongation of greater than 150%. (Paragraph [23] and original claim 103.)

Claim 104 depends from claim 99. It requires that the nonwoven fabric has an elongation of greater than 300%. (Paragraphs [24 and 70] and original claim 104.)

Claim 105 depends from claim 99. It requires that the nonwoven fabric demonstrates anisotropic elongation. (Paragraph [25] and original claim 105.)

Claim 106 is an independent claim. It is drawn to a nonwoven fabric having a permanent set of less than 60% and made from an isotactic propylene polymer composition having a heat of fusion of from 5-45 J/g. (Paragraph [17] and original claim 106.)

Claim 107 depends from claim 106. It requires that the permanent set is less than 30%. (Paragraph [20] and original claim 107.)

Claim 108 depends from claim 106. It requires that the permanent set is less than 15%. (Paragraph [21] and original claim 108.)

Claim 109 depends from claim 106. It requires that the nonwoven fabric has an elongation of greater than 80%. (Paragraph [22] and original claim 109.)

Claim 110 depends from claim 106. It requires that the nonwoven fabric has an elongation of greater than 150%. (Paragraph [23] and original claim 110.)

Claim 111 depends from claim 106. It requires that the nonwoven fabric has an elongation of greater than 300%. (Paragraphs [24 and 70] and original claim 111.)

Claim 112 depends from claim 106. It requires that the nonwoven fabric demonstrates anisotropic elongation. (Paragraph [25] and original claim 112.)

Claim 113 depends from claim 1. It requires that the blend is formed into staple fibers prior to being formed into the non-woven. (Paragraph [55].)

Claim 114 depends from claim 113. It requires that the staple fiber is crimped. (Paragraph [59].)

Claim 115 depends from claim 114. It requires that the staple fiber is 7 to 200 mm long. (Paragraph [59].)

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues presented for review are:

1. Whether the Examiner erred in rejecting Claims 1-71 and 89-115 under 35 U.S.C. § 103(a) as being unpatentable over Timmons et al. EP 0462574 B2 (herein "Timmons") in view of Datta et al. EP 123191 A1 (herein "Datta");

2. Whether the Examiner erred in determining in the Advisory Action that the Timmons fibers are considered to be produced by injection molding; and

3. Whether the Examiner erred in determining in the Advisory Action that the properties reported by Datta would teach away from the invention of Timmons.

VII. ARGUMENT

The Rejection of Claims 1-71 and 89-115

Claims 1-71 and 89-115 were finally rejected as unpatentable over Timmons in view of Datta. The Examiner surmises that at least one of the polymers of Datta may be used for the present invention and asserts the alleged obviousness of substituting such a polymer in the application of Timmons either because similar properties are taught by Datta or because the skilled artisan would be led to provide a product with the properties of Datta.

The Office Action asserts that because one of the polymer compositions employed in the pending claims is disclosed in Datta, it must, therefore, meet the claimed elastic properties. It is also argued that both Timmons and Datta disclose compatibility characteristics, increased tensile strength, and improved process characteristics for their polymer compositions, which would be desirable for fibers and fabrics.

The Advisory Action indicated that fibers such as those produced by Timmons are considered to be produced by injection molding. The advisory action also indicates that the Examiner did not agree that the disclosure of Datta teaches away from the invention of Timmons. The Examiner's position is that both references teach narrow MWD polymers, and the Datta polymer could be substituted into the teachings of Timmons to provide the tensile strength and processing characteristics allegedly achieved by Datta.

The Error in the Rejection

Claims 1-71 and 89-112 are patentable because the references do not teach or suggest the claimed fabrics, laminates, articles, and staple fibers. Moreover, the disclosures lead the skilled artisan away from combining the references to either (i) achieve the claimed invention, or (ii) achieve some other fabric with improved tensile strength and processing characteristics (the latter as indicated in the rejection).

The error in the rejection is that, while the rejection suggests that it would be obvious to try the polymer composition of Datta in the application of Timmons based on the motivation of producing a material with increased tensile strength and improved process characteristics, obviousness to try is not a valid basis for rejection. The rejection under §103 is in error for the following reasons:

(A) There is no motivation in the cited references to use a narrow MWD polypropylene admixed with a second, different polymer also having a narrow MWD.

(B) Further, the properties of the Datta composition do not lead the skilled artisan to select the claimed composition; in fact, they appear to be inconsistent with Timmons' desired porosity characteristic for medical fabrics. There is no suggestion in either Timmons or Datta to make a fiber or fabric having the properties (or using a polymer having the properties) disclosed by Datta.

(C) Contrary to the Examiner's assertion in the Advisory Action, it is incorrect that the fibers of Timmons are produced by injection molding. As taught by Timmons, they are either spun bond or produced by another fiber-producing technique. In contrast, injection molding forms rigid articles in a mold from polymer precursors.

Claims 1-71 and 89-115 are Patentable Under 35 U.S.C. § 103

The Examiner bears the initial burden of factually supporting a *prima facie* conclusion of obviousness. MPEP §2142. In particular, the initial burden is on the Examiner to find some motivation or suggestion to make the claimed invention in light of the prior art teachings. The suggestion to modify must be "clear and particular." In re Sang Su Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433-1434 (Fed. Cir. 2002); Winner Int'l Royalty Corp. v. Ching-Rong Wang,

202 F.3d 1340, 1348-1349, 53 USPQ2d 1580, 1586-1587 (Fed. Cir. 2000). *See also* MPEP §2143.01.

In the present case, the Examiner has not met the initial burden of identifying a motivation or suggestion within either reference to use the Datta polymer in any fabric, let alone as taught by Timmons.

Timmons teaches that, in order to form the fine fibers and melt-blown webs described therein (to achieve small porosity), a single polypropylene must be cracked using peroxide (Timmons at page 2, lines 25-29) to form a modified resin having a narrower molecular weight distribution (MWD) and a higher melt flow rate (MFR) than the starting polypropylene. See Timmons at page 2, line 46 through page 3, line 17. This modified resin has an MWD between 2.8 and 3.5, and an MFR between 800 and 5000 g/10 min (at 230 °C).

A skilled artisan would have concerns about the result of peroxide treatment such as that taught by Timmons on the second polymer of Datta (e.g., would there be interactions between the two polymers?), and would be dissuaded from choosing the polymer combination, particularly because a composition taught for injection molded articles (see Datta claim 14, e.g.) suggests the formation of materials with no porosity. Similarly, the improved tensile strength described by Datta suggests an inability to achieve the extra fine fibers described by Timmons at page 4, lines 32-44. A skilled artisan would find the characteristics of dimensional stability (Datta page 7, line 45) and improved rigidity (Datta column 8, line 16) contrary to the material needed for the soft, flexible fabrics of Timmons. Such characteristics instead suggest that the materials formed therefrom are without porosity and without sufficient ability to form suitable fibers and fabrics.

The skilled artisan, using Timmons as a starting point, would not be led to select a combination of polymers, one of which is different from the typical polypropylene material of Timmons, having a high molecular weight distribution and leading to a mixture having characteristics that do not lead to the properties desired by Timmons. Further, there is no suggestion in any reference to make a fiber or fabric using a composition having the properties described by Datta.

Further, the materials of Timmons must be able to melt at an appropriately low temperature so as to fuse together the SMS laminate web layers. With such characteristics before the skilled artisan, one could only argue that the present invention is at best "obvious to try". In reality, a skilled artisan would not try the Datta composition, but would instead tailor another single, preferably polypropylene, polymer as in Timmons. A skilled artisan also would not proceed with the Datta combination of materials when its resultant utility for fabrics is unknown and the peroxide treatment process result is unknown.

Contrary to the suggestion of obviousness made by the Examiner, there is no motivation

given in the cited references to produce a fabric or fiber with increased tensile strength and process characteristics. No such motivation or reasonable expectation of success is found from the materials of Datta for the fabric of Timmons, nor is the need for such a material shown in either reference. Because there must be a suggestion or motivation, either in the references themselves or in the knowledge generally available to one of skill in the art, to combine the cited references, along with a reasonable expectation of success, and neither is shown in the cited references, the rejection under §103 is improper.

Finally, it is incorrect that, as asserted by the Examiner, the Timmons materials are produced by injection molding, which is a technique for the production of rigid articles suggested in Datta. Timmons does not disclose injection molding and there is no evidence elsewhere that the Timmons materials are injection molded.

Conclusion

Based upon the foregoing remarks, reconsideration and allowance of claims 1-71 and 89-115 are respectfully solicited.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 05-1712. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

January 29, 2007
Date

Amy C. Trexler
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VIII. CLAIMS APPENDIX

CLAIMS ON APPEAL:

1. (Original) A nonwoven fabric made from a composition comprising:
a first component comprising from 5% to 99% by weight based on the total weight of the composition of a polymer selected from the group consisting of homopolymers of propylene and random copolymers of propylene, the polymer having a heat of fusion as determined by DSC of less than 50 J/g and stereoregular propylene crystallinity; and
a second component comprising from 95% to 1% by weight based on the total weight of the composition of a propylene polymer or blends of propylene polymers;
wherein the nonwoven fabric has a permanent set of from less than 60%.

2. (Original) The nonwoven fabric of claim 1, wherein the permanent set is from less than 30%.

3. (Original) The nonwoven fabric of claim 1, wherein the permanent set is from less than 15%.

4. (Original) The nonwoven fabric of claim 1, wherein the nonwoven fabric has an elongation of from greater than 80%.

5. (Original) The nonwoven fabric of claim 1, wherein the nonwoven fabric has an elongation of from greater than 150%.

6. (Original) The nonwoven fabric of claim 1, wherein the nonwoven fabric has an elongation of from greater than 300%.

7. (Original) The nonwoven fabric of claim 1, wherein the nonwoven fabric demonstrates anisotropic elongation.

8. (Original) The nonwoven fabric of claim 1, wherein the first component has isotactic stereoregular propylene crystallinity.

9. (Original) The nonwoven fabric of claim 1, wherein the first component is a random

copolymer of propylene and at least one comonomer selected from ethylene, C_4-C_{12} α-olefins, and combinations thereof.

10. (Original) The nonwoven fabric of claim 9, wherein the comonomer is ethylene.

11. (Original) The nonwoven fabric of claim 1, wherein the first component has a narrow compositional distribution, and a melting point as determined by DSC of from 25°C to 110°C.

12. (Original) The nonwoven fabric of claim 1, wherein the first component comprises from 2 wt% to 25 wt% polymerized ethylene units, based on the total weight of the polymer.

13. (Original) The nonwoven fabric of claim 1, wherein the first component has a heat of fusion as determined by DSC of from 1 J/g to 50 J/g.

14. (Original) The nonwoven fabric of claim 1, wherein the first component has a heat of fusion as determined by DSC of from 3 J/g to 15 J/g.

15. (Original) The nonwoven fabric of claim 1, wherein the first component has a melting point as determined by DSC of from 35°C to 70°C.

16. (Original) The nonwoven fabric of claim 1, wherein the first component has a molecular weight distribution Mw/Mn of from 2.0 to 4.5.

17. (Original) The nonwoven fabric of claim 1, wherein the first component has an MFR of from 5 to 5000.

18. (Original) The nonwoven fabric of claim 1, wherein the second component comprises a propylene polymer produced using a metallocene catalyst system or a Ziegler-Natta catalyst system.

19. (Original) The nonwoven fabric of claim 1, wherein the second component has a Mw/Mn of from 1.5 to 8.0

20. (Original) The nonwoven fabric of claim 1, wherein the second component has a melting

point of from greater than 110°C.

21. (Original) The nonwoven fabric of claim 1, wherein the first component is present in the composition in an amount of from 50 to 99 wt% and the second component is present in an amount of from 50 to 1 wt%, based on the total weight of the composition.

22. (Original) The nonwoven fabric of claim 1, wherein the first component is present in the composition in an amount of from 80 to 99 wt% and the second component is present in an amount of from 20 to 1 wt%, based on the total weight of the composition.

23. (Original) The nonwoven fabric of claim 1, wherein the first component is present in the composition in an amount of from 90 to 99 wt% and the second component is present in an amount of from 10 to 1 wt%, based on the total weight of the composition.

24. (Original) A laminate comprising a nonwoven fabric comprising a layer made from a composition comprising:
a first component comprising a polymer selected from the group consisting of homopolymers of propylene and random copolymers of propylene, wherein the polymer has a heat of fusion as determined by DSC of less than 50 J/g and stereoregular propylene crystallinity; and
a second component comprising a propylene polymer;
wherein the laminate has a permanent set of from less than 60%.

25. (Original) The laminate of claim 24, wherein the permanent set is from less than 30%.

26. (Original) The laminate of claim 24, wherein the permanent set is from less than 15%.

27. (Original) The laminate of claim 24, wherein the laminate has an elongation of from greater than 80%.

28. (Original) The laminate of claim 24, wherein the laminate has an elongation of from greater than 150%.

29. (Original) The laminate of claim 24, wherein the laminate has an elongation of from greater than 300%.

30. (Original) The laminate of claim 24, wherein the laminate demonstrates anisotropic elongation.

31. (Original) The laminate of claim 24, wherein the first component has isotactic stereoregular propylene crystallinity.

32. (Original) The laminate of claim 24, wherein the first component is a random copolymer of propylene and at least one comonomer selected from ethylene, C_4-C_{12} α-olefins, and combinations thereof.

33. (Original) The laminate of claim 32, wherein the comonomer is ethylene.

34. (Original) The laminate of claim 24, wherein the first component has a narrow compositional distribution, and a melting point as determined by DSC of from 25°C to 110°C.

35. (Original) The laminate of claim 24, wherein the first component comprises from 2 wt% to 25 wt% polymerized ethylene units, based on the total weight of the polymer.

36. (Original) The laminate of claim 24, wherein the first component has a heat of fusion as determined by DSC of from 1 J/g to 50 J/g.

37. (Original) The laminate of claim 24, wherein the first component has a heat of fusion as determined by DSC of from 3 J/g to 15 J/g.

38. (Original) The laminate of claim 24, wherein the first component has a melting point as determined by DSC of from 35°C to 70°C.

39. (Original) The laminate of claim 24, wherein the first component has a molecular weight distribution Mw/Mn of from 2.0 to 4.5.

40. (Original) The laminate of claim 24, wherein the first component has an MFR of from 5 to 5000.

41. (Original) The laminate of claim 24, wherein the second component comprises a propylene polymer produced using a metallocene catalyst system or a Ziegler-Natta catalyst system.

42. (Original) The laminate of claim 24, wherein the second component has a Mw/Mn of from 1.5 to 8.0

43. (Original) The laminate of claim 24, wherein the second component has a melting point of from greater than 110°C.

44. (Original) The laminate of claim 24, wherein the first component is present in the composition in an amount of from 50 to 99 wt% and the second component is present in an amount of from 50 to 1 wt%, based on the total weight of the composition.

45. (Original) The laminate of claim 24, wherein the first component is present in the composition in an amount of from 80 to 99 wt% and the second component is present in an amount of from 20 to 1 wt%, based on the total weight of the composition.

46. (Original) The laminate of claim 24, wherein the first component is present in the composition in an amount of from 90 to 99 wt% and the second component is present in an amount of from 10 to 1 wt%, based on the total weight of the composition.

47. (Original) The laminate of claim 24, wherein the laminate comprises a layered structure comprising, in various combinations, spunbond layers and meltblown layers.

48. (Original) An article or an article component comprising a nonwoven fabric made from a composition comprising:
a first component comprising a polymer selected from the group consisting of homopolymers of propylene and random copolymers of propylene, wherein the polymer has a heat of fusion as determined by DSC of from 1 J/g to 50 J/g and stereoregular propylene crystallinity; and
a second component comprising a propylene polymer;
wherein the nonwoven fabric has a permanent set of from less than 60%.

49. (Original) The article or the article component of claim 48, wherein the permanent set is

from less than 30%.

50. (Original) The article or the article component of claim 48, wherein the permanent set is from less than 15%.

51. (Original) The article or the article component of claim 48, wherein the nonwoven fabric has an elongation of from greater than 80%.

52. (Original) The article or the article component of claim 48, wherein the nonwoven fabric has an elongation of from greater than 150%.

53. (Original) The article or the article component of claim 48, wherein the nonwoven fabric has an elongation of from greater than 300%.

54. (Original) The article or the article component of claim 48, wherein the nonwoven fabric demonstrates anisotropic elongation.

55. (Original) The article or the article component of claim 48, wherein the first component has isotactic stereoregular propylene crystallinity.

56. (Original) The article or the article component of claim 48, wherein the first component is a random copolymer of propylene and at least one comonomer selected from ethylene, C_4-C_{12} α-olefins, and combinations thereof.

57. (Original) The article or the article component of claim 56, wherein the comonomer is ethylene.

58. (Original) The article or the article component of claim 48, wherein the first component has a narrow compositional distribution, and a melting point as determined by DSC of from 25°C to 110°C.

59. (Original) The article or the article component of claim 48, wherein the first component comprises from 2 wt% to 25 wt% polymerized ethylene units, based on the total weight of the polymer.

60. (Original) The article or the article component of claim 48, wherein the first component has a heat of fusion as determined by DSC of from 1 J/g to 50 J/g.

61. (Original) The article or the article component of claim 48, wherein the first component has a heat of fusion as determined by DSC of from 3 J/g to 15 J/g.

62. (Original) The article or the article component of claim 48, wherein the first component has a melting point as determined by DSC of from 35°C to 70°C.

63. (Original) The article or the article component of claim 48, wherein the first component has a molecular weight distribution Mw/Mn of from 2.0 to 4.5.

64. (Original) The article or the article component of claim 48, wherein the first component has an MFR of from 5 to 5000.

65. (Original) The article or the article component of claim 48, wherein the second component comprises a propylene polymer produced using a metallocene catalyst system or a Ziegler-Natta catalyst system.

66. (Original) The article or the article component of claim 48, wherein the second component has a Mw/Mn of from 1.5 to 8.0

67. (Original) The article or the article component of claim 48, wherein the second component has a melting point of from greater than 110°C.

68. (Original) The article or the article component of claim 48, wherein the first component is present in the composition in an amount of from 50 to 99 wt% and the second component is present in an amount of from 50 to 1 wt%, based on the total weight of the composition.

69. (Original) The article or the article component of claim 48, wherein the first component is present in the composition in an amount of from 80 to 99 wt% and the second component is present in an amount of from 20 to 1 wt%, based on the total weight of the composition.

70. (Original) The article or the article component of claim 48, wherein the first component is present in the composition in an amount of from 90 to 99 wt% and the second component is present in an amount of from 10 to 1 wt%, based on the total weight of the composition.

71. (Original) The article or article component of claim 48, wherein the article or the article component is selected from the group consisting of at least one of a hygiene product, a medical product, and a consumer product.

72. (Withdrawn) A process to produce a nonwoven fabric, the process comprising the steps of:
blending a first component comprising from 5% to 99% by weight based on the total weight of the composition of a polymer selected from the group consisting of homopolymers of propylene and random copolymers of propylene, the polymer having a heat of fusion as determined by DSC of less than 50 J/g and stereoregular propylene crystallinity; and
a second component comprising from 95% to 1% by weight based on the total weight of the composition of a propylene polymer or blends of propylene polymers; to form a blend;
extruding the blend to form a plurality of fibers to form a web; and
calendering the web to form the nonwoven fabric, the nonwoven fabric having a permanent set of from less than 60%.

73. (Withdrawn) The process of claim 72, wherein the permanent set is from less than 30%.

74. (Withdrawn) The process of claim 72, wherein the permanent set is from less than 15%.

75. (Withdrawn) The process of claim 72, wherein the nonwoven fabric has an elongation of from greater than 80%.

76. (Withdrawn) The process of claim 72, wherein the nonwoven fabric has an elongation of from greater than 150%.

77. (Withdrawn) The process of claim 72, wherein the nonwoven fabric has an elongation of from greater than 300%.

78. (Withdrawn) The process of claim 72, wherein the nonwoven fabric demonstrates anisotropic elongation.

79. (Withdrawn) The process of claim 72, wherein the first component is present in the blend in an amount of from 50 to 99 wt% and the second component is present in an amount of from 50 to 1 wt%, based on the total weight of the blend.

80. (Withdrawn) The process of claim 72, wherein the first component is present in the blend in an amount of from 80 to 99 wt% and the second component is present in an amount of from 20 to 1 wt%, based on the total weight of the blend.

81. (Withdrawn) The process of claim 72, wherein the first component is present in the blend in an amount of from 90 to 99 wt% and the second component is present in an amount of from 10 to 1 wt%, based on the total weight of the blend.

82. (Withdrawn) The process of claim 72, wherein the calendering further comprises annealing.

83. (Withdrawn) The process of claim 82, wherein the calendering comprises annealing the nonwoven fabric in a single step.

84. (Withdrawn) The process of claim 83, wherein the annealing is performed at temperature of at least 40°C.

85. (Withdrawn) The process of claim 83, wherein the annealing is performed at temperature of at least 90°C.

86. (Withdrawn) The process of claim 83, wherein the annealing is performed at temperature of at least 100°C.

87. (Withdrawn) The process of claim 83, wherein the annealing is performed at temperature of at least 130°C.

88. (Withdrawn) The process of claim 83, wherein the annealing is performed at temperature

of at least 160°C.

89. (Original) A laminate produced by the process of thermobonding a plurality of layers comprising nonwoven fabrics comprising at least one layer of a melt blown fabric, a spunbond fabric, or a combination of a melt blown fabric and a spunbond fabric, the at least one layer made from a composition comprising:
a first component comprising a polymer selected from the group consisting of homopolymers of propylene and random copolymers of propylene, wherein the polymer has a heat of fusion as determined by DSC of less than 50 J/g and stereoregular propylene crystallinity; and
a second component comprising a propylene polymer;
wherein the at least one layer has a permanent set of from less than 60%.

90. (Original) The laminate of claim 89, wherein the permanent set is from less than 30%.

91. (Original) The laminate of claim 89, wherein the permanent set is from less than 15%.

92. (Original) The laminate of claim 89, wherein the at least one layer has an elongation of from greater than 80%.

93. (Original) The laminate of claim 89, wherein the at least one layer has an elongation of from greater than 150%.

94. (Original) The laminate of claim 89, wherein the at least one layer has an elongation of from greater than 300%.

95. (Original) The laminate of claim 89, wherein the at least one layer demonstrates anisotropic elongation.

96. (Original) The laminate of claim 89, wherein the first component is present in the composition in an amount of from 50 to 99 wt% and the second component is present in an amount of from 50 to 1 wt%, based on the total weight of the composition.

97. (Original) The laminate of claim 89, wherein the first component is present in the composition in an amount of from 80 to 99 wt% and the second component is present in

an amount of from 20 to 1 wt%, based on the total weight of the composition.

98. (Original) The laminate of claim 89, wherein the first component is present in the composition in an amount of from 90 to 99 wt% and the second component is present in an amount of from 10 to 1 wt%, based on the total weight of the composition.

99. (Original) A nonwoven fabric made from a composition comprising:
a first component comprising from 5% to 100% by weight based on the total weight of the composition of a polymer selected from the group consisting of homopolymers of propylene and random copolymers of propylene, the polymer having a heat of fusion as determined by DSC of less than 50 J/g and stereoregular propylene crystallinity; and
a second component comprising from 95% to 0% by weight based on the total weight of the composition of a propylene polymer or blends of propylene polymers;
wherein the nonwoven fabric has a permanent set of from less than 60%.

100. (Original) The nonwoven fabric of claim 99, wherein the permanent set is from less than 30%.

101. (Original) The nonwoven fabric of claim 99, wherein the permanent set is from less than 15%.

102. (Original) The nonwoven fabric of claim 99, wherein the nonwoven fabric has an elongation of from greater than 80%.

103. (Original) The nonwoven fabric of claim 99, wherein the nonwoven fabric has an elongation of from greater than 150%.

104. (Original) The nonwoven fabric of claim 99, wherein the nonwoven fabric has an elongation of from greater than 300%.

105. (Original) The nonwoven fabric of claim 99, wherein the nonwoven fabric demonstrates anisotropic elongation.

106. (Original) A nonwoven fabric made from an isotactic propylene polymer composition, the isotactic propylene polymer composition having a heat of fusion as determined by

DSC of from 5 J/g to 45 J/g; wherein the nonwoven fabric has a permanent set of from less than 60%.

107. (Original) The nonwoven fabric of claim 106, wherein the permanent set is from less than 30%.

108. (Original) The nonwoven fabric of claim 106, wherein the permanent set is from less than 15%.

109. (Original) The nonwoven fabric of claim 106, wherein the nonwoven fabric has an elongation of from greater than 80%.

110. (Original) The nonwoven fabric of claim 106, wherein the nonwoven fabric has an elongation of from greater than 150%.

111. (Original) The nonwoven fabric of claim 106, wherein the nonwoven fabric has an elongation of from greater than 300%.

112. (Original) The nonwoven fabric of claim 106, wherein the nonwoven fabric demonstrates anisotropic elongation.

113. (Previously Presented) The nonwoven fabric of claim 1 wherein the blend is formed into staple fibers prior to being formed into the non-woven.

114. (Previously Presented) The non-woven fabric of claim 113 wherein the staple fiber is crimped.

115. (Previously Presented) The non-woven fiber of claim 114 wherein the staple fiber is 7 to 200 mm long.

116. (Withdrawn) A process to produce a nonwoven fabric, the process comprising:

a) blending a first component comprising from 5% to 99% by weight based on the total weight of the composition of a polymer selected from the group consisting of homopolymers of propylene and random copolymers of propylene, the polymer

having a heat of fusion as determined by DSC of less than 50 J/g and stereoregular propylene crystallinity; and a second component comprising from 95% to 1% by weight based on the total weight of the composition of a propylene polymer or blends of propylene polymers; to form a blend composition;

b) extruding the blend composition to produce, finish, and wind a filament, then draw, finish, crimp, heat set and cut the filament into a staple fiber; and

c) forming the staple fiber into a non-woven fabric.

117. (Withdrawn) The process of claim 116 wherein the staple fiber is 7 to 200 mm long.

EVIDENCE APPENDIX

Pursuant to 37 C.F.R. § 41.37(c)(1)(ix), submitted herewith are copies of any evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 or any other evidence entered by the Examiner and relied upon by Appellant in the appeal.

NONE

RELATED PROCEEDINGS APPENDIX

Submitted herewith are copies of decisions rendered by a court or the Board in any proceeding identified in Section II pursuant to 37 C.F.R. § 41.37(c)(1)(ii).

NONE